

Archery Hunting Questionnaire 2013

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Abstract

The average archer in Wisconsin is male, 50 years old, has 23 years of archery hunting experience, and uses a compound bow, camouflage, a tree stand, bow sights, deer scent, grunt call and mechanical release. Bowhunter density ranged from a high of 17.4 hunters per square mile of deer range per day in deer management unit 69C, to a low of 0.01 hunters per square mile of deer range per day in deer management unit 48.

Methods

Survey participant's names were randomly drawn from 2013-14 non-resident and resident archery, and conservation patron license holders in proportion to license sales in each county. Ten thousand questionnaires were mailed to participants at the close of the archery season. A second mailing was made to 5,000 non-respondents. Archers were asked specific questions about their bowhunting season and asked to mail the questionnaire back. All returned questionnaires were entered into the DNR UNIX productions server. Analysis was done using the Statistical Analysis System (SAS).

Results

Responses were received from 4,474 archers, duplicate responses were removed, and 4,431 responses were used in summarizing the survey. The corrected response rate was 44.3%.

The mean age of archers in Wisconsin is 49.8 years. They have 23.4 years of archery hunting experience, and are predominantly male (95.6%) (Table 1, Questions 1, 2, and 3). Approximately 59% of Wisconsin archers placed a mean of 2.6 "trail camera(s)" for scouting deer (Table 1, Question 4).

Slightly more than 92% of respondents reported archery hunting during the 2013-14 season. Of the archers that hunted, 86.1% reported hunting deer. The next most frequently hunted animal was turkey, 8.8% (Table 1, Questions 5 and 6).

Active archers purchased an average 0.3 additional antlerless permits. They registered 0.23 antlered bucks, 0.20 adult does, 0.03 buck fawns, and 0.02 doe fawns. Most archers hunted on private land (82.8%) (Table 1, Questions 7, 8, and 10).

Archers could hunt with a bow or crossbow during the 9-day firearm deer season and 10% of archers took advantage of this opportunity. On average archers hunted 2.4 days of the 9-day firearm season with archery equipment. They registered 0.04 antlered deer and 0.08 antlerless deer (Table 1, Questions 11 and 11a).

More than half of archers did not pass up a "good" shot at an antlerless deer hoping to shoot a buck later (51.8%), and did not hit a deer they were unable to retrieve (90.4%) (Table 1, Questions 12 and 13). Most archers typically used a compound bow (81.0%), camouflage (96.1%), tree stand (91.5%), bow sights (87.4%), deer scent (59.1%), grunt call (72.2%), and mechanical release (70.6%) (Table 1, Questions 14 and 15).

An estimate of bow hunting pressure was derived from questionnaire responses. The following formula was used to estimate archery hunter days, (((2013-14 archery license sales * Percent active hunters) * Percent hunters in a unit) * Mean days hunted in a unit). The result is the number of hunter days for each deer management unit in the state (Table 1, Question 9).

About 50.6% of respondents rated the quality of the 2013 archery deer season as “Very Low” or “Fairly Low” and only 16.8% of respondents rated the quality of the 2013 archery deer season as “Very High” or “Fairly High”. Almost 59% of archers say deer numbers went down in their hunting area from last year. The factor the respondents indicated being the most important for a “quality” deer hunt was “Seeing Deer” (Table 1, Questions 17, 18, and 19). Twenty-two percent of respondents were “Very Dissatisfied” with the number of deer they saw during the entire archery season (Table 1, Question 20).

Ninety-seven percent of archers have archery deer hunted from a tree stand, with less than 10% having fallen and less than 20% having a near-accident from a tree stand. Falls or near-accidents occurred most often while climbing up into the tree stand (29.0%); frequently from a hang-on tree stand type (no ladder) (44.3%). Thirty-three percent of archers always wear a safety harness or fall restraint, while archers who do not always wear a safety harness or fall restraint are “extra careful climbing up and down from their stand” (20.7%) or “have never fallen or had a near-accident” (17.3%) (Table 1, Questions 21, 22, 23, 24, and 25).

Almost half of archers (48.3%) would be willing to travel up to 10 miles one way to allow DNR deer managers to collect samples or drop off biological samples at DNR stations. With potential changes to electronic registration of deer and hunters no longer having to bring in deer, archers were asked to rate their willingness to assist in deer management. Nineteen percent of archers were “very willing” to be periodically be asked to forego e-registration on select days and have to drive their deer to be registered, weighed, aged, and body measurements taken. When asked to remove the lower jaw and bring it to a Wisconsin DNR reception site within 1-2 weeks of killing the deer, 27.7% of archers were “very unwilling”. Archers were also “very unwilling” to remove the deer’s head and bring it to a Wisconsin DNR reception site for CWD surveillance within 1-2 days of killing the deer (31.9%) or to remove the lymph nodes, store on ice in a cooler, and bring the samples to a Wisconsin DNR reception site for CWD surveillance within 5 days of killing the deer (42.3%) (Table 1, Question 26 and 27). However, archers would be “very willing” to take weights and body measurements and enter into a Wisconsin DNR website (21.8%) as well as to remove a tooth and mail it to the Wisconsin DNR (22.6%).

Table 1. Responses to the 2013 Archery Hunter Questionnaire.

Question 1. What is your age?

Mean age = 49.8

Age Group	Frequency	Percent
12-18	23	0.50%
19-30	516	11.6%
31-45	1,114	25.1%
46-65	2,119	47.7%
65+	671	15.1%

No Answer = 31

Question 2. What is your gender?

Response	Frequency	Percent
Male	4,253	95.6%
Female	198	4.4%

No Answer = 23

Question 3. How many years have you archery hunted? **Mean experience = 23.4**

Experience Group	Frequency	Percent
0-7	829	19.0%
8-15	753	17.3%
16-22	599	13.7%
23-30	855	19.6%
30+	1,326	30.4%

No Answer = 112

Question 4. Did you place any "trail camera(s)" for scouting for deer this fall?

Response	Frequency	Percent
Yes	2,621	59.1%
No	1,812	40.9%

No Answer = 41

	Mean
Number of Cameras Used	2.6
Number of Days Cameras Were Used	90.4
Number of Days Spent Setting/Tending Trail Cameras	18.8

Question 5. Did you hunt with archery equipment during the 2013 season?

Response	Frequency	Percent
Yes	4,124	92.4%
No	338	7.6%

No Answer = 12

Question 6. If you archery hunted during the 2013 season, what did you hunt?
Please check all that apply.

Response	Frequency	Percent
Deer	4,030	86.1%
Bear	55	1.2%
Small Game	163	3.5%
Turkey	413	8.8%
Waterfowl	18	0.4%

Question 7. How many additional antlerless permits did you purchase this season?

Mean antlerless permits = 0.28

Question 8. How many and what type of deer did you register during the 2013 archery deer season?

Response	Mean
Antlered	0.23
Adult Doe	0.20
Buck Fawn	0.03
Doe Fawn	0.02

Question 9. Please list the DMU's you hunted in and give your best estimate of the number of days you hunted deer in each listed DMU. Any hunt counts as one day even if you did not spend the entire day hunting.

Unit	Deer Range (miles sq)	# of Responses	% hunting	Mean Days Hunted	Hunters/mile ² /day of season	Total Hunter Days
01	161	18	0.35	19.3	0.41	6,841
1M	32	4	0.08	8.0	1.18	3,914
02	627	45	0.88	12.9	0.45	29,355
03	555	27	0.53	14.1	0.30	17,549
04	349	22	0.43	10.3	0.26	9,302
06	546	28	0.55	11.3	0.36	20,603
07	189	3	0.06	7.7	0.09	1,686
08	370	33	0.65	12.0	0.55	21,007
09	438	29	0.57	10.8	0.61	27,798
10	345	30	0.59	13.5	0.55	19,838
11	341	32	0.63	15.4	0.68	24,235
12	264	19	0.37	11.2	0.36	9,891
13	715	51	1.00	12.6	0.32	23,666
14	328	29	0.57	12.6	0.66	22,588
15	414	46	0.90	10.6	0.68	29,112
16	335	42	0.82	14.8	0.48	16,715
17	238	22	0.43	10.0	0.42	10,337
18	368	30	0.59	15.2	0.63	24,075
19	403	37	0.73	9.8	0.58	24,330
20	378	34	0.67	13.1	0.26	10,157
21	225	49	0.96	18.1	1.14	26,718
22	349	46	0.90	19.2	0.74	27,043
22A	353	36	0.71	13.6	0.75	27,349
23	403	47	0.92	14.1	0.76	32,031
24	278	29	0.57	16.5	0.55	15,969
25	437	39	0.77	14.4	0.65	29,477
26	391	36	0.71	12.7	0.85	34,358

Question 9. Please list the DMU's you hunted in and give your best estimate of the number of days you hunted deer in each listed DMU. Any hunt counts as one day even if you did not spend the entire day hunting.

Unit	Deer Range (miles sq)	# of Responses	% hunting	Mean Days Hunted	Hunters/mile ² /day of season	Total Hunter Days
27	248	42	0.82	14.0	1.34	34,498
28	656	20	0.39	17.8	0.34	23,235
29A	239	20	0.39	16.2	0.49	12,157
29B	233	11	0.22	8.3	0.16	3,904
30	315	27	0.53	17.6	0.21	6,915
31	414	34	0.67	15.4	0.39	16,991
32	487	69	1.36	13.9	0.73	36,767
33	276	42	0.82	17.6	0.89	25,679
34	262	10	0.20	18.4	0.45	12,279
35	354	29	0.57	8.4	0.65	24,085
36	274	25	0.49	16.6	0.85	24,077
37	235	27	0.53	13.9	0.90	22,078
38	429	41	0.81	16.2	0.42	18,870
39	425	22	0.43	15.0	0.37	16,417
40	328	33	0.65	9.8	0.64	21,671
41	195	44	0.86	13.3	0.83	16,897
42	327	29	0.57	15.3	0.69	23,542
43	408	45	0.88	12.9	0.40	16,949
44	466	47	0.92	14.5	0.53	25,732
45	593	60	1.18	15.6	0.65	39,826
46	321	47	0.92	14.9	1.32	44,100
47	269	38	0.75	12.6	1.29	36,084
48	356	2	0.04	4.0	0.01	197
49A	235	32	0.63	17.1	1.43	34,845
49B	182	35	0.69	17.7	1.37	25,948
50	334	31	0.61	13.8	0.61	21,281
51A	220	38	0.75	15.9	1.38	31,598
51B	389	67	1.32	17.9	1.70	68,702
52	304	31	0.61	15.5	0.83	26,154
52A	1				0.00	295
53	461	80	1.57	14.1	1.47	70,424
54A	484	84	1.65	15.1	1.11	55,964
54B	186	68	1.34	14.8	2.37	45,868
54BCWD	203	3	0.06	20.7	0.17	3,507
54C	95	19	0.37	15.4	0.85	8,371
54D					0.00	985
55	631	100	1.96	14.7	1.00	65,881
56	335	35	0.69	15.6	0.54	18,700
57	146	28	0.55	14.7	1.56	23,586
57A	238	38	0.75	15.4	1.23	30,376
57B	252	52	1.02	13.6	1.44	37,816
57C	266	40	0.79	15.6	1.26	34,981
58	506	81	1.59	14.3	1.12	58,802
59A	520	80	1.57	16.3	0.83	44,774
59B	687	101	1.98	18.3	0.90	64,573
59C	626	104	2.04	15.9	1.26	82,256
59D	384	55	1.08	16.6	1.01	40,420
59M	44	14	0.27	12.5	2.84	12,854
60A	170	34	0.67	19.0	1.26	22,288
60B	83	27	0.53	18.6	2.65	22,846
60M	80	34	0.67	14.2	2.07	17,198
61	958	139	2.73	16.7	0.90	89,912
61A	2	2	0.04	16.0	4.96	1,218
62A	402	88	1.73	17.6	2.05	85,749
62B	363	135	2.65	16.4	3.31	125,187

Question 9. Please list the DMU's you hunted in and give your best estimate of the number of days you hunted deer in each listed DMU. Any hunt counts as one day even if you did not spend the entire day hunting.

Unit	Deer Range (miles sq)	# of Responses	% hunting	Mean Days Hunted	Hunters/mile ² /day of season	Total Hunter Days
63A	339	111	2.18	18.0	3.40	120,064
63B	252	58	1.14	19.1	1.95	51,073
64	243	87	1.71	18.6	3.33	84,149
64A		2	0.04	15.0	4.59	38,666
64M	81	37	0.73	15.1	1.66	29,702
65A	172	48	0.94	19.6	2.53	91,224
65B	347	101	1.98	16.4	3.05	54,457
66	172	62	1.22	16.6	2.25	82,788
67A	354	78	1.53	14.9	2.22	43,430
67B	188	39	0.77	21.3	3.13	42,268
68A	130	47	0.92	22.2	3.31	125,187
68B	183	55	1.08	20.3	1.60	30,308
69	391	131	2.57	19.4	2.12	86,120
69C	1	1	0.02	2.0	17.42	960
70CWD	273	47	0.92	14.0	1.02	28,859
70ACWD	219	28	0.55	12.4	1.30	29,595
70BCWD	212	42	0.82	16.6	1.26	27,872
70CCWD	7				0.00	0
70DCWD	2				0.00	0
70ECWD	69	13	0.26	20.3	1.72	12,376
70FCWD	1				0.00	0
70GCWD	122	24	0.47	16.2	2.11	26,783
71CWD	626	75	1.47	14.6	0.64	41,771
72	504	78	1.53	15.4	1.21	63,206
72A	6				0.00	0
73A	6				0.00	0
73B	185	30	0.59	19.0	1.17	22,472
73BCWD	54	2	0.04	15.0	0.15	861
73D	158	19	0.37	11.3	0.73	11,956
73ECWD	277	26	0.51	16.9	0.76	21,783
74A	200	29	0.57	14.7	0.97	20,222
74B	432	37	0.73	14.9	0.40	17,899
75ACWD	146	26	0.51	15.3	0.82	12,526
75BCWD	5				0.00	0
75CCWD	124	13	0.26	13.5	1.03	13,327
75DCWD	112	22	0.43	17.0	1.16	13,602
76CWD	320	52	1.02	14.8	0.85	28,419
76ACWD	305	65	1.28	20.5	2.25	71,293
76MCWD	78	21	0.41	10.6	1.18	9,631
77ACWD	124	40	0.79	17.9	3.24	41,788
77BCWD	216	41	0.81	18.2	2.30	51,619
77CCWD	187	5	0.10	16.4	0.17	3,372
77C	135	72	1.41	15.2	6.30	88,382
77D	3	5	0.10	4.8	5.07	1,661
77M	312	67	1.32	19.4	2.48	80,422
78	22				0.04	98
79	59				0.00	0
80A	152	17	0.33	16.6	0.98	15,489
80B	194	33	0.65	20.9	2.07	41,737
80C	5				0.00	0
81	18	2	0.04	5.0	0.47	887
82	4				0.00	0
MCC	75	1	0.02	20.0	0.53	4,135
TOTAL	36,531	5,091	100.0	15.8	1.06	4,006,692

Question 10. On what type of land did you do most of your hunting during the 2013 archery deer season? (Check ONLY one)

Response	Frequency	Percent
Private	3,408	82.8%
Public	606	14.7%
Industrial Forest Land	27	0.7%
Private land "Forest Tax Law"	77	1.9%

No Answer = 6

Question 11. Did you hunt with a bow or crossbow during the 9-day firearm deer season?

Response	Frequency	Percent
Yes	409	10.0%
No	3,694	90.0%

No Answer = 21

If yes, which one?

Response	Frequency	Percent
Bow	256	63.7%
Crossbow	132	32.8%
Both	14	3.5%

No Answer = 7

Question 11a. Number of days you hunted with archery equipment during the 9-day firearm deer season.

	Mean
Number of Days	2.41
Number of Harvested Antlered Deer	0.04
Number of Harvested Antlerless Deer	0.08

Question 12. Did you pass up a "good" shot at an antlerless deer hoping to shoot a buck later?

Response	Frequency	Percent
Yes	1,967	48.2%
No	2,110	51.8%

No Answer = 47

Question 13. Did you hit a deer that you were unable to retrieve?

Response	Frequency	Percent
Yes	390	9.6%
No	3,690	90.4%

No Answer = 44

Question 14. Please check all the following methods and equipment that you used during the deer season.

Response	Frequency	Percent
Camouflage	3,970	96.1%
Tree Stand	3,773	91.5%
String Tracker	73	1.8%
Bow Sights	3,606	87.4%
Deer Scent (attractant)	2,438	59.1%
Grunt call	2,977	72.2%
Rattling	1,829	44.4%
Mechanical Release	2,911	70.6%
Ground Blind	1,327	32.2%

Question 15. What type of bow did you use most this past season? Check only one.

Response	Frequency	Percent
Longbow	23	0.6%
Recurve	54	1.3%
Compound	3,312	81.0%
Crossbow	702	17.2%

No Answer = 33

Question 16. Did you deer hunt in a DMU where baiting was legal?

Response	Frequency	Percent
Yes	1,984	48.7%
No	1,606	39.5%
Unsure	480	11.8%

No Answer = 54

If yes, did you bait for deer?

Response	Frequency	Percent
Yes	1,040	52.9%
No	927	47.1%

No Answer = 17

Question 17. Overall, how would you rate the quality of your 2013 archery deer season? Please check only one.

Response	Frequency	Percent
Very High	235	5.7%
Fairly High	454	11.1%
About Average	1,337	32.6%
Fairly Low	1,211	29.6%
Very Low	859	21.0%

No Answer = 28

Question 18. In your hunting area, how have deer numbers changed from the last year?
Check only one.

Response	Frequency	Percent
Deer numbers went up	174	4.3%
Deer numbers went down	2,394	58.5%
About the same	1,293	31.6%
I did not hunt the same areas as last year	106	2.6%
Unsure	123	3.0%

No Answer = 34

Question 19. Please rate the factors that most influence your perception of a “quality” deer hunt. Enter a value of 1 to 7 next to each statement, with “1” having the most effect and “7” having the least effect on your hunting experience.

Response	% Rating it # 1	Mean
An opportunity to kill a deer	24.8%	3.2
Seeing deer	48.5%	2.4
Seeing bucks	27.4%	3.1
Weather	8.8%	4.6
Not seeing other hunters	22.8%	4.0
Spending time with friends and family	32.5%	3.4
Killing a deer	14.1%	4.5

Question 20. Think about the number of deer you saw during the **ENTIRE** Archery season. How satisfied are you with the number of deer you saw? (**Circle ONE number**)

Mean response value = 3.1

Response	Frequency	Percent
1 (Very Dissatisfied)	906	22.2%
2	744	18.2%
3	817	20.0%
4 (Neutral)	721	17.7%
5	488	12.0%
6	241	5.9%
7 (Very Satisfied)	164	4.0%

No Answer = 43

Question 21. Have you ever archery deer hunted from a tree stand?

Response	Frequency	Percent
Yes	3,971	97.3%
No	111	2.7%

No Answer = 42

Question 22. Have you ever fallen or had a near-accident from a tree stand while archery deer hunting? (Check one for fall and one for near-accident).

Fallen	Frequency	Percent
Yes	356	9.3%
No	3,465	90.7%
No Answer = 150		

Near-Accident	Frequency	Percent
Yes	714	18.9%
No	3,058	81.1%
No Answer = 199		

Question 23. When using your tree stand, at what point did you fall or have a near-accident? (Check all that apply).

Response	Frequency	Percent
While attaching the tree stand	209	19.3%
While climbing up into my stand	315	29.0%
While climbing down from my stand	279	25.7%
While I was in my stand	215	19.8%
At some other point?	67	6.2%

Question 24. From what type of tree stand did you fall or have a near-accident? (Check all that apply).

Response	Frequency	Percent
Ladder tree stand	221	21.4%
Hang-on tree stand (no ladder)	458	44.3%
Climbing stand	268	25.9%
Not in a tree – elevated tri-pod or quad box blinds	14	1.4%
Other	72	7.0%

Question 25. What are some reasons you do not **always** wear a safety harness or fall restraint? (Check all that apply).

Response	Frequency	Percent
I always wear a safety harness or fall restraint	1,807	33.0%
I do not own one	382	7.0%
It's difficult to use	515	9.4%
It takes too long to climb up or down from my stand	218	4.0%
I'm extra careful climbing up and down from my stand	1,135	20.7%
I've never fallen or had a near-accident	951	17.3%
Some other reason?	475	8.7%

Question 26. How far would you be willing to travel to allow DNR deer managers to either have biological samples and measurements taken from your deer, or to drop off biological samples and measurements you take from your deer at a DNR designation station?

Response	Frequency	Percent
Up to 10 miles one way	1,970	48.3%
From 10 – 20 miles one way	911	24.3%
From 20 – 40 miles one way	165	4.0%
Greater than 40 miles one way	37	0.9%
Unwilling to travel any distance	913	22.4%
No Answer = 48		

Question 27. With potential changes to electronic (phone-in or internet) registration of deer and hunters no longer having to bring in deer, collecting valuable biological data will rely on the cooperation of deer hunters. Please review the statements below and rate your willingness to assist in deer management.

- a) Periodically be asked to forego e-registration on select days and have to drive your deer to be registered, weighed, aged, and body measurements taken. **Mean response value = 4.5**

Response	Frequency	Percent
1 (Very Unwilling)	545	13.5%
2	251	6.2%
3	289	7.1%
4 (Neither Willing or Unwilling)	897	22.1%
5	626	15.5%
6	651	16.1%
7 (Very Willing)	792	19.6%

No Answer = 73

- b) Asked to remove the lower jaw and bring it to a Wisconsin DNR reception site within 1-2 weeks of killing the deer. **Mean response value = 3.5**

Response	Frequency	Percent
1 (Very Unwilling)	1,125	27.7%
2	472	11.6%
3	447	11.0%
4 (Neither Willing or Unwilling)	688	16.9%
5	527	13.0%
6	385	9.5%
7 (Very Willing)	421	10.4%

No Answer = 59

- c) Asked to provide the department weights and body measurements that you take yourself and enter into a Wisconsin DNR website. **Mean response value = 4.4**

Response	Frequency	Percent
1 (Very Unwilling)	610	15.0%
2	311	7.7%
3	299	7.4%
4 (Neither Willing or Unwilling)	702	17.3%
5	611	15.1%
6	637	15.7%
7 (Very Willing)	884	21.8%

No Answer = 70

- d) Asked to remove a tooth, and mail it to the Wisconsin DNR in an envelope provided by the department. **Mean response value = 4.4**

Response	Frequency	Percent
1 (Very Unwilling)	733	18.0%
2	306	7.5%
3	276	6.8%
4 (Neither Willing or Unwilling)	554	13.6%
5	555	13.6%
6	724	17.8%
7 (Very Willing)	921	22.6%

No Answer = 55

- e) Asked to remove the deer's head and bring it to a Wisconsin DNR reception site for CWD surveillance within 1-2 days of killing the deer. **Mean response value = 3.1**

Response	Frequency	Percent
1 (Very Unwilling)	1,296	31.9%
2	553	13.6%
3	460	11.3%
4 (Neither Willing or Unwilling)	697	17.2%
5	425	10.5%
6	308	7.6%
7 (Very Willing)	320	7.9%

No Answer = 65

- f) Asked to remove the lymph nodes, store on ice in a cooler, and bring the samples to a Wisconsin DNR reception site for CWD surveillance within 5 days of killing the deer.

Mean response value = 2.6

Response	Frequency	Percent
1 (Very Unwilling)	1,720	42.3%
2	629	15.5%
3	444	10.9%
4 (Neither Willing or Unwilling)	584	14.4%
5	287	7.1%
6	163	4.0%
7 (Very Willing)	235	5.8%

No Answer = 62